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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,711

03/29/2005

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PU030225

2040

24498 7590 02/25/2010

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EXAMINER

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ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

02/25/2010

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JILL MACDONALD BOYCE

Appeal 2009-002274
Application 10/529,711
Technology Center 2600

Decided: February 25, 2010

Before KENNETH W. HAIRSTON, CARLA M. KRIVAK, and
THOMAS S. HAHN, *Administrative Patent Judges*.

KRIVAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1, 3-9, 11, 13, and 14. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Appellant's claimed invention is a video encoder that applies an implicit weighting factor to a reference prediction of a video compression encoder and decoder that uses multiple reference pictures (Spec. 5:32-6:2). Relative weighting factors, based on an interpolation/extrapolation formula, are determined using distances from reference pictures to current pictures (Spec. 6:2-4).

Independent claim, reproduced below, is representative:

1. A video encoder for encoding video signal data for an image block and a plurality of reference picture indices, the encoder comprising a reference picture weighting factor assignor responsive to the relative positioning between the image block and first and second reference pictures indicated by the plurality of reference picture indices, the reference picture weighting factor assignor for calculating respective implicit weighting factors for the first and second reference pictures based on respective distances of the image block to the first and second reference pictures.

REFERENCES

Tanaka	US 4,663,665	May 5, 1987
Etoh	US 6,081,551	June 27, 2000
Bellers	US 6,782,054 B2	Aug. 24, 2004

The Examiner rejected claims 1, 3-9, 11, and 13 under 35 U.S.C. § 103(a) based upon the teachings of Etoh and Tanaka.

The Examiner rejected claim 14 under 35 U.S.C. § 103(a) based upon the teachings of Etoh, Tanaka, and Bellers.

The Examiner finds that Etoh teaches all the features of Appellant's invention except for calculating weighting factors based on respective distances, but that Tanaka teaches this feature (Ans. 3).

Appellant contends Tanaka teaches weighting factor assignment based on direction and difficulty in detecting a motion vector, not respective distances of an image block to first and second reference pictures, as claimed (App. Br. 14; Reply Br. 12). Appellant asserts Tanaka teaches, in Figs. 6d-6f, that “the weighting factor W_n of the motion vector V_n is small in the DIRECTION (direction component) in which the motion vector V_n can be readily detected and is large in the DIRECTION (direction component) in which the motion vector V_n can be hardly detected” (Reply Br. 12). Thus, the weighting factor determination approach in Tanaka is based on the capability of detecting the motion vector with respect to a given direction (*id.*).

The Examiner finds Tanaka’s indicating horizontal and vertical directions refers to components of the motion vector in the X-axis and Y-axis directions, “which are definitely defined as distances” (Ans. 8). However, the Examiner has not identified a specific citation in Tanaka’s disclosure that teaches or even suggests the motion vectors are defined as distances of an image block to first and second reference pictures, nor has the Examiner provided any persuasive evidence that this is so aside from providing conclusory statements. As Etoh also lacks this feature (Ans. 3), Appellant’s claimed invention as set forth in claims 1, 3-9, 11, and 13 is not obvious over the combination of Etoh and Tanaka.

With respect to claim 14, we do not find the reference to the teachings of Bellers cure the noted shortcomings in the teachings of Etoh and Tanaka.

CONCLUSION

The Examiner erred in rejecting claims 1, 3-9, 11, 13, and 14 under 35 U.S.C. § 103.

DECISION

The Examiner's decision rejecting claims 1, 3-9, 11, 13, and 14 is reversed.

REVERSED

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